



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/510,043

06/15/2005

Anil Kishen

1304.P004US/LYH/ay

8341

38556

7590

10/14/2008

LAWRENCE Y.D. HO & ASSOCIATES PTE LTD
30 BIDEFORD ROAD, #02-02, THONGSIA BUILDING
SINGAPORE, 229922
SINGAPORE

EXAMINER

HOBBS, MICHAEL L

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

10/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/510,043 | Applicant(s) KISHEN ET AL. | |
| | Examiner MICHAEL HOBBS | Art Unit 1797 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 20-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 14-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I, claims 1-12 and 14-19 in the reply filed on 07/29/2008 is acknowledged. Claims 13 and 20-24 have been withdrawn and claims 1-12 and 14-19 are pending further examination upon the record.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

3. Claims 7-9 and 14-19 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 7-9 and 14-19 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1797

5. Claims 1-5 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Erb et al. (US 5,854,863).

6. Erb discloses for claim 1 a sensor that includes a fiber optic cable (fiber 12) which has had the cladding striped off of one portion of the fiber (col. 10 lines 22-23) and covered with a coating (col. 10 lines 33-36; Table 1). Also, the sensor chamber contains a fluorophore or precursor which combines with the target molecule to measure the extent of the immuno-chemical reaction (col. 6 lines 42-44 & 49-51).

7. For claim 2, the unclad portion of the fiber discloses by Erb is being interpreted as being "declad" and for claims 3 and 4, Erb further discloses using two or a plurality of unclad portions on two fiber segments (col. 10 lines 20-24). With regards to claim 5, Erb discloses measuring the fluorescence from the immuno-chemical reaction by a detector (detector 16; col. 7 lines 26-30). For claim 10, the fluorophore combines with the target molecule as discussed above.

8. For claim 11, Erb discloses a sensor that includes a fiber optic cable (fiber 12) which has had the cladding striped off of one portion of the fiber (col. 10 lines 22-23) and covered with a coating (col. 10 lines 33-36; Table 1). Also, the sensor chamber contains a fluorophore or precursor which combines with the target molecule to measure the extent of the immuno-chemical reaction (col. 6 lines 42-44 & 49-51). Erb discloses a light source (source 14) that "co-operates" with the first end of the optical fiber (fiber 12; col. 7 lines 8-10) and includes a monitoring means or detector that is fully capable of "co-operating" with the unclad portion of the fiber.

Art Unit: 1797

9. For claim 12, Erb discloses that an evanescent field (field 42) or wave is generated from the input light (col. 7 lines 17-19).

10. Therefore, Erb meets the limitations of claims 1-5 and 10-12.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 1797

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eber et al. (US 5,854,863) in view of Jaduszilwer et al. (US 5,747,348) (will be referred as '348).

15. Eber is silent regarding the coating being a glass film.

16. Jaduszilwer discloses an optic hydrazine-fuel sensor that includes a fiber optic cable that has an unclad portion that is used to detect hydrazine vapors where this unclad portion has a reactive cladding or coating as part of the sensor. Also, ('348) includes some of the basic structure of the instant application such as an optical fiber with unclad portions and a coating on this unclad portion. Furthermore, ('348) monitors hydrazine gas in an evanescent operational mode which is the same type of detection mode used by Eber and the instant application. For claim 6, ('348) discloses an optical fiber that has an unclad portion (portion 32a-b) that is coated with a porous cladding or film that is a porous glass matrix used as part of the sensor (col. 6 lines 57-59). It would be obvious to one of ordinary skill in the art to use the glass matrix as suggested by ('348) in order to have a biocompatible sensor for sensing the immuno-reaction of Eber. The suggestion for doing so at the time would have been in order to have a sensor with a very high dose sensitivity (col. 6 lines 60-61).

Conclusion

17. Claims 1-6 and 10-12 are rejected.

Art Unit: 1797

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL HOBBS whose telephone number is (571)270-3724. The examiner can normally be reached on Monday-Thursday 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Beisner/
Primary Examiner, Art Unit 1797

/M.L.H./